```
Sequence Listing
```

<110> Kureha Chemical Industry Co., Ltd.

<120> Novel Proteins and Novel Genes Encoding the Same

<130> KRH-647

<150> JP 2000-042933

<151> 2000-02-21

<160> 10

<210> 1

<211> 2180

<212> DNA

<213> Homo sapiens

<220>

<221> CDS

<222> (37)..(1482)

<400> 1

ggcacgagct gaactgaacc tcttctttac aacgaa atg atg ctc aag tct atc 54

Met Met Leu Lys Ser IIe

1 5

aca gaa agc ttt gcc aca gca atc cat ggc ttg aaa gtg gga cac ctg 102 Thr Glu Ser Phe Ala Thr Ala IIe His Gly Leu Lys Val Gly His Leu 10 15 20

aca gat cgt gtt att cag agg agc aag agg atg att cta gac act ctg 150 Thr Asp Arg Val IIe Gln Arg Ser Lys Arg Met IIe Leu Asp Thr Leu 25 30 35

ggt gct ggg ttc ctg gga acc act acg gaa gtg ttt cac ata gcc agc 198 Gly Ala Gly Phe Leu Gly Thr Thr Thr Glu Val Phe His IIe Ala Ser 40 45 50

| | | _ | _ | | | agt Ser | | | | | | | | | | 246 |
|-----|-----|-----|-----|-----|-----|-------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| _ | | _ | | | | ccg Pro | | | | | | | | | | 294 |
| | _ | | | tcc | _ | gat Asp | | _ | gac | _ | | | | gcc | | 342 |
| | | | 999 | _ | _ | ctt Leu | | gtc | | | | | gca | | | 390 |
| _ | | | _ | | _ | ttt Phe 125 | | | | _ | _ | _ | _ | _ | | 438 |
| | _ | | | _ | | caa GIn | | _ | | _ | | | | | | 486 |
| - | | _ | | | _ | aga Arg | | | | | | | - | | _ | 534 |
| _ | | _ | _ | _ | _ | gca Ala | | _ | | | | | _ | _ | | 582 |
| _ | _ | _ | _ | _ | _ | gcc Ala | | _ | _ | | | _ | | _ | | 630 |
| atg | gcc | aat | gct | gcc | acc | cag | acc | aag | ccc | ctc | cac | att | ggc | aat | gct | 678 |

| Met | Ala 200 | Asn | Ala | Ala | Thr | GIn 205 | Thr | Lys | Pro | Leu | His 210 | lle | Gly | Asn | Ala | |
|-----|------------|-----|-----|-----|-----|------------|-----|-------------------|-----|-----|------------|-----|-----|-----|-----|------|
| | | | | | _ | - | - | ttt Phe | _ | _ | _ | _ | | | | 726 |
| | | | | | | - | | gag Glu | _ | | | | _ | | | 774 |
| | | | | | | - | | cca Pro 255 | - | | - | | | _ | | 822 |
| | | | | | | | | ttt Phe | _ | - | | | _ | | | 870 |
| | | | | | | | | gct Ala | | | | | | | | 918 |
| | | | | | | | | act Thr | _ | | | _ | - | | | 966 |
| | | | | | | | | gta Val | | | | | | | | 1014 |
| | | | | | | | | cag GIn 335 | | | | | | | | 1062 |
| | | | | | | | | tca Ser | | | _ | _ | | | | 1110 |

| _ | | | | | | ctg Leu 365 | | | | | | | | | | 1158 |
|------|-------|-------|-------|-------|-------|-------------------|-------|-------|-------|------|------|-------------------|-------|-------|--------|------|
| _ | • | | _ | | _ | ttc Phe | | | _ | | _ | _ | | | | 1206 |
| | | _ | • | | • | acc Thr | | | _ | - | | _ | | | | 1254 |
| | | | | | | ctg Leu | | | | | | | | | | 1302 |
| • | • | | _ | | _ | atg Met | _ | | | _ | | | - | | | 1350 |
| | _ | | _ | | | cta Leu 445 | | | | | | | | | | 1398 |
| | | | | | | ccc Pro | | | | | | | | | | 1446 |
| | • | • | | | | atc He | | | | | tgaç | ggct [.] | tac d | caaca | atctaa | 1499 |
| atga | actt | tgc a | attt | 3999 | ag a | ttcaa | atgat | t ttg | ggtt | tgta | aago | caag | ggt (| etge | tgcttg | 1559 |
| gtt | ttcc | cag (| gaaaa | aatga | aa ca | aaaga | atgga | a gaç | gagto | ccag | aaad | cagaa | act a | acata | atatct | 1619 |
| ggaa | aggag | gec · | ttct | ectga | aa aa | attt | tgcaç | g gad | cagt | tcca | ctta | accta | aaa · | tcaaç | gatgaa | 1679 |

acacacaca aaaaatgagt ttgtaagcat tcacaagggt gaaattcaac tcacctgtga 1739

tttacttata aaattaatct cttcatagga attatgtgtg gacttcatga geetcaaggt 1799

tttagaggga tgtgaacctg catgtatatt ttctgacagt ggagaggget ctggtgcatt 1859

gtgtcaccaa cagateteet agaccatgge ttattaccaa geeetceaca gtgcaagggg 1919

tgctactggg gaatgggtgg gtttaaatee tgeetetgee atteactaga tgtageettg 1979

ageatgttac cattageeet etgeeteagt tteeetattt gtcaageega agtaaaaage 2039

agtetggaaa aategeattt tggetetaga acceatggte ttaageactg caatatatea 2099

cettteagta taaaaatatt tgaatcagag ttgcaataaa gaatgaaaag gaaaaaagag 2159

aagtaaaaaa aaaaaaaaa a

<210> 2

<211> 481

<212> PRT

<213> Homo sapiens

<400> 2

Met Met Leu Lys Ser lle Thr Glu Ser Phe Ala Thr Ala lle His Gly
1 5 10 15

Leu Lys Val Gly His Leu Thr Asp Arg Val IIe Gln Arg Ser Lys Arg
20 25 30

Met lie Leu Asp Thr Leu Gly Ala Gly Phe Leu Gly Thr Thr Thr Glu
35 40 45

Val Phe His IIe Ala Ser Gln Tyr Ser Lys IIe Tyr Ser Ser Asn IIe 50 55 60

| Ser 65 | Ser | Thr | Val | Trp | Gly 70 | GIn | Pro | Asp | He | Arg 75 | Leu | Pro | Pro | Thr | Tyr 80 |
|------------|------------|------------|------------|------------|------------|------------|------------|--------------------|------------|-------------|-------------|------------|------------|------------|------------|
| Ala | Ala | Phe | Val | Asn 85 | Gly | Val | Ala | lle | His 90 | Ser | Met | Asp | Phe | Asp 95 | Asp |
| Thr | Trp | His | Pro 100 | Ala | Thr | His | Pro | Ser 105 | Gly | Ala | Val | Leu | Pro 110 | Val | Leu |
| Thr | Ala | Leu 115 | Ala | Glu | Ala | Leu | Pro 120 | Arg | Ser | Pro | Lys | Phe 125 | Ser | Gly | Leu |
| Asp | Leu 130 | Leu | Leu | Ala | Phe | Asn 135 | Val | Gly | He | Glu | Va I 140 | GIn | Gly | Arg | Leu |
| Leu 145 | His | Phe | Ala | Lys | Glu 150 | Ala | Asn | Asp | Met | Pro 155 | Lys | Arg | Phe | His | Pro 160 |
| Pro | Ser | Val | Val | Gly 165 | Thr | Leu | Gly | Ser | Ala 170 | Ala | Ala | Ala | Ser | Lys 175 | Phe |
| Leu | Gly | Leu | Ser 180 | Ser | Thr | Lys | Cys | A rg 185 | Glu | Ala | Leu | Ala | 11e 190 | Ala | Val |
| Ser | His | Ala 195 | Gly | Ala | Pro | Met | Ala 200 | Asn | Ala | Ala | Thr | GIn 205 | Thr | Lys | Pro |
| Leu | His 210 | He | Gly | Asn | Ala | Ala 215 | Lys | His | Gly | He | Glu 220 | Ala | Ala | Phe | Leu |
| Ala 225 | Met | Leu | Gly | Leu | GIn 230 | Gly | Asn | Lys | Gln | Va I 235 | Leu | Asp | Leu | Glu | A1a |
| Gly | Phe | Gly | Ala | Phe | Tyr | Ala | Asn | Tyr | Ser 250 | Pro | Lys | Val | Leu | Pro 255 | Ser |

lle Ala Ser Tyr Ser Trp Leu Leu Asp Gin Gin Asp Val Ala Phe Lys

265

270

260

- Arg Phe Pro Ala His Leu Ser Thr His Trp Val Ala Asp Ala Ala 275 280 285
- Ser Val Arg Lys His Leu Val Ala Glu Arg Ala Leu Leu Pro Thr Asp 290 295 300
- Tyr lle Lys Arg lle Val Leu Arg lle Pro Asn Val Gln Tyr Val Asn 305 310 315 320
- Arg Pro Phe Pro Val Ser Glu His Glu Ala Arg His Ser Phe Gln Tyr 325 330 335
- Val Ala Cys Ala Met Leu Leu Asp Gly Gly Ile Thr Val Pro Ser Phe 340 345 350
- His Glu Cys Gln IIe Asn Arg Pro Gln Val Arg Glu Leu Leu Ser Lys 355 360 365
- Val Glu Leu Glu Tyr Pro Pro Asp Asn Leu Pro Ser Phe Asn IIe Leu 370 375 380
- Tyr Cys Glu lle Ser Val Thr Leu Lys Asp Gly Ala Thr Phe Thr Asp 385 390 395 400
- Arg Ser Asp Thr Phe Tyr Gly His Trp Arg Lys Pro Leu Ser Gln Glu
 405 410 415
- Asp Leu Glu Glu Lys Phe Arg Ala Asn Ala Ser Lys Met Leu Ser Trp 420 425 430
- Asp Thr Val Glu Ser Leu IIe Lys IIe Val Lys Asn Leu Glu Asp Leu 435 440 445
- Glu Asp Cys Ser Val Leu Thr Thr Leu Leu Lys Gly Pro Ser Pro Pro 450 455 460
- Glu Val Ala Ser Asn Ser Pro Ala Cys Asn Asn Ser Ile Thr Asn Leu

480 465 470 475 Ser <210> 3 <211> 1970 <212> DNA <213> Homo sapiens <220> <221> CDS <222> (126)..(1298) <400> 3 ggcacgaggc cagccaatat agcaagatct acagttccaa catatccagc actgtttggg 60 gtcagccaga catcaggctc ccgcccacat atgctgcttt tgtgaacggt gtggctattc 120 acted atgigatittt gat gad acgitgg dad ect ged accided tot ggg 170 Met Asp Phe Asp Asp Thr Trp His Pro Ala Thr His Pro Ser Gly 15 1 5 10 get gtc ett eet gtc etc aca get tta gea gaa gee etg eea agg agt 218 Ala Val Leu Pro Val Leu Thr Ala Leu Ala Glu Ala Leu Pro Arg Ser 20 25 30 266 cca aag ttt tct ggc ctt gac ctg ctg ctg gct ttc aat gtt ggt att Pro Lys Phe Ser Gly Leu Asp Leu Leu Leu Ala Phe Asn Val Gly IIe 35 40 45 gaa gtg caa ggc cga tta ctg cat ttc gcc aag gag gcc aat gac atg 314 Glu Val Gln Gly Arg Leu Leu His Phe Ala Lys Glu Ala Asn Asp Met 50 55 60 cca aag aga ttc cat ccc cct tcc gtg gta gga acg ttg ggt agt gct 362 Pro Lys Arg Phe His Pro Pro Ser Val Val Gly Thr Leu Gly Ser Ala

70

75

65

| - | _ | _ | | _ | ttt Phe 85 | | | | | | | | | | | 410 |
|-----|-----|-----|-----|-----|-------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| - | _ | _ | | | gtt Val | | | | | | | | | | | 458 |
| _ | | | | | ccc Pro | | | | | | | | | | | 506 |
| | - | _ | _ | | ttg Leu | | | | | | | _ | | _ | | 554 |
| _ | - | | | | gca Ala | | | | | | | | | | | 602 |
| | | _ | | | agc Ser 165 | | | | | | | | | | | 650 |
| _ | - | | _ | | aag Lys | _ | | | | | | | | | | 698 |
| | - | - | _ | _ | gca Ala | | | _ | _ | | | | | | | 746 |
| - | _ | | | | gac Asp | Tyr | | _ | _ | | | | | | | 794 |
| aat | gtc | cag | tat | gta | aac | agg | ccc | ttt | cca | gtt | tcg | gag | cat | gaa | gcc | 842 |

| Asn | 225 | GIn | Tyr | Val | Asn | Arg 230 | Pro | Phe | Pro | Val | Ser 235 | Glu | His | Glu | Ala | |
|-----|-----|-----|-----|-----|-------------------|------------|-----|-----|-----|-----|------------|-----|-----|-----|-----|------|
| _ | | | | _ | tat Tyr 245 | | - | _ | _ | _ | _ | | _ | | | 890 |
| | | | | | ttc Phe | | | | | | | | | | | 938 |
| | | | | | aag Lys | | | | | | | | | | | 986 |
| | | | | | ctg Leu | | - | - | | _ | | • | | _ | _ | 1034 |
| | _ | | | | gat Asp | _ | | _ | | | | | | | • | 1082 |
| | | | | | gag Glu 325 | | | | _ | _ | | _ | _ | | | 1130 |
| | | | | | tgg Trp | | | | | | | | | | | 1178 |
| | | | | _ | cta Leu | _ | _ | - | | | | | | | | 1226 |
| | | | | | cca Pro | - | | - | | | | | _ | _ | | 1274 |

aat tot atc aca aat otc toc tgaggottac caacatotaa atgactttgc 1325 Asn Ser IIe Thr Asn Leu Ser 385 390

<210> 4

<211> 390

<212> PRT

<213> Homo sapiens

<400> 4

Met Asp Phe Asp Asp Thr Trp His Pro Ala Thr His Pro Ser Gly Ala

1 5 10 15

Val Leu Pro Val Leu Thr Ala Leu Ala Glu Ala Leu Pro Arg Ser Pro

| | | | 20 | | | | | 25 | | | | | 30 | | |
|------------|------------|------------|------------|------------|------------|------------|--------------------|------------|------------|------------|-------------------|------------|------------|------------|------------|
| Lys | Phe | Ser 35 | Gly | Leu | Asp | Leu | Leu 40 | Leu | Ala | Phe | Asn | Va I 45 | Gly | He | Glu |
| Val | GIn 50 | Gly | Arg | Leu | Leu | His 55 | Phe | Ala | Lys | Glu | A la 60 | Asn | Asp | Met | Pro |
| Lys 65 | Arg | Phe | His | Pro | Pro 70 | Ser | Val | Val | Gly | Thr 75 | Leu | Gly | Ser | Ala | A1a |
| Ala | Ala | Ser | Lys | Phe 85 | Leu | Gly | Leu | Ser | Ser 90 | Thr | Lys | Cys | Arg | Glu 95 | Ala |
| Leu | Ala | He | Ala 100 | Val | Ser | His | Ala | Gly 105 | Ala | Pro | Met | Ala | Asn 110 | Ala | Ala |
| Thr | GIn | Thr 115 | Lys | Pro | Leu | His | lle 120 | Gly | Asn | Ala | Ala | Lys 125 | His | Gly | He |
| Glu | Ala 130 | Ala | Phe | Leu | Ala | Met 135 | Leu | Gly | Leu | GIn | Gly 140 | Asn | Lys | GIn | Val |
| Leu 145 | Asp | Leu | Glu | Ala | Gly 150 | Phe | Gly | Ala | Phe | Tyr 155 | Ala | Asn | Tyr | Ser | Pro 160 |
| Lys | Val | Leu | Pro | Ser 165 | lle | Ala | Ser | Tyr | Ser 170 | Trp | Leu | Leu | Asp | GIn 175 | Glr |
| Asp | Val | Ala | Phe 180 | Lys | Arg | Phe | Pro | Ala 185 | His | Leu | Ser | Thr | His 190 | Trp | Va |
| Ala | Asp | Ala 195 | | Ala | Ser | Val | A rg 200 | Lys | His | Leu | Val | Ala 205 | Glu | Arg | Ala |
| Leu | Leu 210 | Pro | Thr | Asp | Tyr | 11e 215 | Lys | Arg | He | Val | Leu 220 | Arg | He | Pro | Asr |

Val Gln Tyr Val Asn Arg Pro Phe Pro Val Ser Glu His Glu Ala Arg 225 230 235 240

His Ser Phe Gln Tyr Val Ala Cys Ala Met Leu Leu Asp Gly Gly lle 245 250 255

Thr Val Pro Ser Phe His Glu Cys Gln IIe Asn Arg Pro Gln Val Arg 260 265 270

Glu Leu Leu Ser Lys Val Glu Leu Glu Tyr Pro Pro Asp Asn Leu Pro 275 280 285

Ser Phe Asn IIe Leu Tyr Cys Glu IIe Ser Val Thr Leu Lys Asp Gly 290 295 300

Ala Thr Phe Thr Asp Arg Ser Asp Thr Phe Tyr Gly His Trp Arg Lys 305 310 315 320

Pro Leu Ser Gln Glu Asp Leu Glu Glu Lys Phe Arg Ala Asn Ala Ser 325 330 335

Lys Met Leu Ser Trp Asp Thr Val Glu Ser Leu lle Lys lle Val Lys 340 345 350

Asn Leu Glu Asp Leu Glu Asp Cys Ser Val Leu Thr Thr Leu Leu Lys 355 360 365

Gly Pro Ser Pro Pro Glu Val Ala Ser Asn Ser Pro Ala Cys Asn Asn 370 375 380

Ser lle Thr Asn Leu Ser 385 390

<210> 5

<211> 652

<212> DNA

<213> Homo sapiens

| <220> <221> CDS <222> (56) (307) | |
|---|-----|
| <400> 5 ggcaccagge gcaccgccg gcgtccagat ttggcaatte ttcgctgaag teate atg Met 1 | 58 |
| agc ttt ttc caa ctc ctg atg aaa agg aag gaa ctc att ccc ttg gtg Ser Phe Phe GIn Leu Leu Met Lys Arg Lys GIu Leu IIe Pro Leu Vai 5 10 15 | 106 |
| gtg ttc atg act gtg gcg gcg ggt gga gcc tca tct ttc gct gtg tat Val Phe Met Thr Val Ala Ala Gly Gly Ala Ser Ser Phe Ala Val Tyr 20 25 30 | 154 |
| tct ctt tgg aaa acc gat gtg atc ctt gat cga aaa aaa aat cca gaa Ser Leu Trp Lys Thr Asp Val IIe Leu Asp Arg Lys Lys Asn Pro Glu 35 40 45 | 202 |
| cct tgg gaa act gtg gac cct act gta cct caa aag ctt ata aca atc Pro Trp Glu Thr Val Asp Pro Thr Val Pro Gln Lys Leu IIe Thr IIe 50 55 60 65 | 250 |
| aac caa caa tgg aaa ccc att gaa gag ttg caa aat gtc caa agg gtg Asn Gln Gln Trp Lys Pro IIe Glu Glu Leu Gln Asn Val Gin Arg Val 70 75 80 | 298 |
| acc aaa tgacgagccc tcgcctcttt cttctgaaga gtactctata aatctagtgg Thr Lys | 354 |
| aaacatttet geacaaacta gattetggae aceagtgtge ggaaatgett etgetacatt | 414 |
| tttagggttt gtctacattt tttgggctct ggataaggaa ttaaaggagt gcagcaataa | 474 |
| ctgcactgtc taaaagtttg tgcttatttt cttgtaaatt tgaatattgc atattgaaat | 534 |

ttttgtttat gatctatgaa tgtttttctt aaaatttaca aagctttgta aattagattt 594 tctttaataa aatgccattt gtgcaagatt tctcaaagaa aaaaaaaaa aaaaaaaa 652

<210> 6

<211> 83

<212> PRT

<213> Homo sapiens

<400> 6

Met Ser Phe Phe Gln Leu Leu Met Lys Arg Lys Glu Leu IIe Pro Leu 1 5 10 15

Val Val Phe Met Thr Val Ala Ala Gly Gly Ala Ser Ser Phe Ala Val 20 25 30

Tyr Ser Leu Trp Lys Thr Asp Val IIe Leu Asp Arg Lys Lys Asn Pro 35 40 45

Glu Pro Trp Glu Thr Val Asp Pro Thr Val Pro Gln Lys Leu lle Thr
50 55 60

Ile Asn Gln Gln Trp Lys Pro Ile Glu Glu Leu Gln Asn Val Gln Arg
65 70 75 80

Val Thr Lys

<210> 7

<211> 34

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: NLG-2 forward primer

```
<400> 7
                                                                    34
 cacggatcca ttcttcgctg aagtcatcat gagc
 <210> 8
 <211> 34
 <212> DNA
 <213> Artificial Sequence
 <220>
 <223> Description of Artificial Sequence: NLG-2 reverse
       primer
 <400> 8
                                                                    34
 gtggaattet ttggteacce tttggaeatt ttge
 <210> 9
<211> 35
 <212> DNA
 <213> Artificial Sequence
<220>
 <223> Description of Artificial Sequence: NLG-1-1 forward
       primer
 <400> 9
                                                                    35
cacggatcct tctttacaac gaaatgatgc tcaag
 <210> 10
<211> 39
 <212> DNA
<213> Artificial Sequence
 <220>
<223> Description of Artificial Sequence: NLG-1-1 reverse
```

primer

<400> 10 gtggaattcg gagagatttg tgatagaatt attacatgc

39